

# INTERNET COOPERATION TREATY

## PCT

### NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 27 July 2001 (27.07.01)	
<b>International application No.</b> PCT/GB00/03730	<b>Applicant's or agent's file reference</b> PG3798
<b>International filing date (day/month/year)</b> 29 September 2000 (29.09.00)	<b>Priority date (day/month/year)</b> 01 October 1999 (01.10.99)
<b>Applicant</b> TITE, John	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
30 April 2001 (30.04.01)

☐ in a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  Pascal Piriou  Telephone No.: (41-22) 338.83.38
--	--



## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

REES, Marion, L  
GlaxoSmithKline  
Corporate Intellectual Property  
Two New Horizons Court  
Brentford  
Middlesex TW8 9EP  
ROYAUME-UNI

Date of mailing (day/month/year) 13 juillet 2001 (13.07.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference PG3798	
International application No. PCT/GB00/03730	International filing date (day/month/year) 29 septembre 2000 (29.09.00)

1. The following indications appeared on record concerning:		
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input checked="" type="checkbox"/> the agent
<input type="checkbox"/> the common representative		
Name and Address REES, Marion, L Glaxo Wellcome Plc Glaxo Wellcome House Berkeley Avenue Greenford Middlesex UB6 0NN United Kingdom	State of Nationality	State of Residence
	Telephone No. 020 8966 8000	
	Facsimile No. 020 8966 8838	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address
<input type="checkbox"/> the nationality		
<input type="checkbox"/> the residence		
Name and Address REES, Marion, L GlaxoSmithKline Corporate Intellectual Property Two New Horizons Court Brentford Middlesex TW8 9EP United Kingdom	State of Nationality	State of Residence
	Telephone No. 020 8966 8412	
	Facsimile No. 020 8966 8838	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input checked="" type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the elected Offices concerned	
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer R. Chrem Telephone No.: (41-22) 338.83.38
--	--



## PATENT COOPERATION TREATY

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Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

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Two New Horizons Court  
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ROYAUME-UNI

Date of mailing (day/month/year) 13 juillet 2001 (13.07.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference PG3798	
International application No. PCT/GB00/03730	International filing date (day/month/year) 29 septembre 2000 (29.09.00)

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<input type="checkbox"/> the common representative		
Name and Address REES, Marion, L Glaxo Wellcome Plc Glaxo Wellcome House Berkeley Avenue Greenford Middlesex UB6 0NN United Kingdom	State of Nationality	State of Residence
	Telephone No. 020 8966 8000	
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	Teleprinter No.	
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<input type="checkbox"/> the nationality		
<input type="checkbox"/> the residence		
Name and Address REES, Marion, L GlaxoSmithKline Corporate Intellectual Property Two New Horizons Court Brentford Middlesex TW8 9EP United Kingdom	State of Nationality	State of Residence
	Telephone No. 020 8966 8412	
	Facsimile No. 020 8966 8838	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input checked="" type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the elected Offices concerned	
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer  R. Chrem  Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

REES, Marion, L  
GlaxoSmithKline  
Corporate Intellectual Property  
(CN9.25.1)  
980 Great West Road  
Brentford  
Middlesex TW8 9GS  
ROYAUME-UNI

<b>Date of mailing</b> (day/month/year) 01 March 2002 (01.03.02)	
<b>Applicant's or agent's file reference</b> PG3798	<b>IMPORTANT NOTIFICATION</b>
<b>International application No.</b> PCT/GB00/03730	<b>International filing date</b> (day/month/year) 29 September 2000 (29.09.00)

## 1. The following indications appeared on record concerning:

☐ the applicant      ☐ the inventor      ☒ the agent      ☐ the common representative

## Name and Address

REES, Marion, L  
GlaxoSmithKline  
Corporate Intellectual Property  
Two New Horizons Court  
Brentford  
Middlesex TW8 9EP  
United Kingdom

## State of Nationality

## State of Residence

## Telephone No.

020 8966 8412

## Facsimile No.

020 8966 8838

## Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person      ☐ the name      ☒ the address      ☐ the nationality      ☐ the residence

## Name and Address

REES, Marion, L  
GlaxoSmithKline  
Corporate Intellectual Property  
(CN9.25.1)  
980 Great West Road  
Brentford  
Middlesex TW8 9GS  
United Kingdom

## State of Nationality

## State of Residence

## Telephone No.

+44(0) 20 8047 5000

## Facsimile No.

+44(0) 20 8047 6894

## Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

☒ the receiving Office      ☐ the designated Offices concerned  
☐ the International Searching Authority      ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority      ☐ other:

<b>The International Bureau of WIPO</b> <b>34, chemin des Colombettes</b> <b>1211 Geneva 20, Switzerland</b> Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  <b>Jaime LEITAO</b> Telephone No.: (41-22) 338.83.38
--	--



(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
12 April 2001 (12.04.2001)

PCT

(10) International Publication Number  
**WO 01/25792 A1**

(51) International Patent Classification<sup>7</sup>: G01N 33/68

(21) International Application Number: PCT/GB00/03730

(22) International Filing Date:  
29 September 2000 (29.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
9923309.0 1 October 1999 (01.10.1999) GB

(71) Applicant (for all designated States except US): GLAXO GROUP LIMITED [GB/GB]; Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): TITE, John [GB/GB]; Glaxo Wellcome Plc, Gunnels Wood Road, Stevenage, Middlesex SG1 2NY (GB).

(74) Agent: REES, Marion, L; Glaxo Wellcome Plc, Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

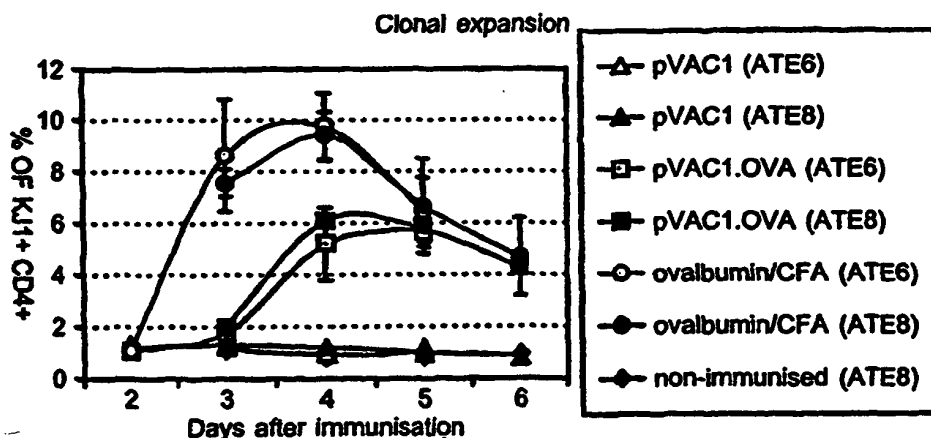
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- With international search report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ASSAYING IN VIVO T-CELL RESPONSE UPON DNA VACCINATION



(57) Abstract: A method for assessing a T-cell response to nucleic acid administration comprises: (a) transferring into a mammal T-cells expressing a T-cell receptor for an antigen (TCR-T-cells); (b) administering nucleic acid encoding said antigen to the mammal; (c) assessing an immune response associated with said TCR-T-cells.



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03730

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, PAJ, WPI Data, EMBASE, MEDLINE, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MANICKAN ELANCHEZHIAN ET AL: "Induction of protective immunity against herpes simplex virus with DNA encoding the immediate early protein ICP 27." VIRAL IMMUNOLOGY, vol. 8, no. 2, 1995, pages 53-61, XP000981753 ISSN: 0882-8245 abstract	1,2,4,8,9
X	WO 99 19478 A (BARZAGA ELENE ;US HEALTH (US); ZAREMBA SAM (US); SCHLOM JEFFREY (U) 22 April 1999 (1999-04-22) abstract page 18, line 14 - line 17 page 56 -page 57; claims 38,39 page 5, line 10 - line 15 --- -/-	1,3



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

7 February 2001

Date of mailing of the international search report

26/02/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Tuyman, A



## INTERNATIONAL SEARCH REPORT

Int. Patent Application No

PCT/GB 00/03730

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SEARLE PETER F ET AL: "Immunotherapy II: Antigen, receptors and costimulation." CANCER AND METASTASIS REVIEWS, vol. 15, no. 3, 1996, pages 329-349, XP000981545 ISSN: 0167-7659	1,2
A	abstract	11
A	PAPE KATHRYN A ET AL: "Use of adoptive transfer of T-cell-antigen-receptor-transgenic T cells for the study of T-cell activation in vivo." IMMUNOLOGICAL REVIEWS, vol. 156, 1997, pages 67-78, XP000981639 ISSN: 0105-2896 cited in the application the whole document	1-8,10, 11
A	BRINKMANN VOLKER ET AL: "TCR-stimulated naive human CD4+ 45RO- T cells develop into effector cells that secrete IL-13, IL-5, and IFN-gamma, but no IL-4, and help efficient IgE production by B cells." JOURNAL OF IMMUNOLOGY, vol. 154, no. 7, 1995, pages 3078-3087, XP002159305 ISSN: 0022-1767 abstract page 3078, left-hand column, line 1 -right-hand column, line 1	1,4-8, 10,11
A	WO 98 08947 A (US HEALTH) 5 March 1998 (1998-03-05) abstract	1,12
P,X	WO 00 12121 A (GLAXO GROUP LTD ;CHARO JEHAD (SE); KIESSLING ROLF (SE)) 9 March 2000 (2000-03-09) abstract page 21 -page 22; example 1 page 26 -page 27; example 7 page 33, line 10 -page 34, line 3	1-5,7,8
P,X	WO 99 65522 A (SIDNEY JOHN ;EPIMMUNE INC (US); SOUTHWOOD SCOTT (US); SETTE ALESSA) 23 December 1999 (1999-12-23) abstract page 20, line 8 - line 23 page 20, line 28 -page 21, line 6 page 30, line 31 - line 32	1,2,9

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03730

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>CREUSOT REMI ET AL: "CD4 T-cell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells."</p> <p>IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 XP002159306</p> <p>Joint Congress of the British Society for Immunology and the British Society for Allergy &amp; Clinical Immunology.; Harrogate, England, UK; November 30-December 03, 1999 ISSN: 0019-2805 the whole document</p> <p style="text-align: center;">-----</p>	1-8, 11



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

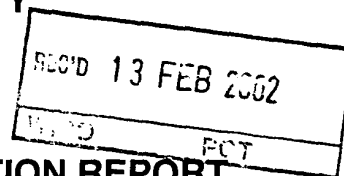
PCT/GB 00/03730

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9919478 A	22-04-1999	AU 9500498 A EP 1017810 A	03-05-1999 12-07-2000
WO 9808947 A	05-03-1998	AU 5507098 A	19-03-1998
WO 0012121 A	09-03-2000	AU 5740299 A	21-03-2000
WO 9965522 A	23-12-1999	AU 4577899 A	05-01-2000



## PATENT COOPERATION TREATY

PCT



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PG3798/WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/03730	International filing date (day/month/year) 29/09/2000	Priority date (day/month/year) 01/10/1999
International Patent Classification (IPC) or national classification and IPC G01N33/68		
Applicant GLAXO GROUP LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☒ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  30/04/2001	Date of completion of this report  11.02.2002
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  GONCALVES M L F C  Telephone No. +49 89 2399 8127 



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03730

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-14 as originally filed

**Claims, No.:**

1-12 as originally filed

**Drawings, sheets:**

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03730

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**II. Priority**

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:

☐ copy of the earlier application whose priority has been claimed.

☐ translation of the earlier application whose priority has been claimed.

2. ☒ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid.

Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1-12.

because:

☒ the said international application, or the said claims Nos. 1-12 with respect to IA relate to the following subject matter which does not require an international preliminary examination (*specify*):  
**see separate sheet**

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03730

could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims
	No: Claims 1-12
Inventive step (IS)	Yes: Claims
	No: Claims 1-12
Industrial applicability (IA)	Yes: Claims
	No: Claims .

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**



## **Section II**

1. The document WO 00/12121 (D1), from the same applicant, filed on 25.08.1999 and claiming a priority from 26.08.1998, discloses a method of DNA vaccination. Example 1 of WO 00/12121, describes on page 22 the transferring into normal syngeneic mice lymphoid cells from TCR-transgenic mice, expressing a receptor specific for an ovalbumin antigen. These mice were then immunised subcutaneously ( by means of gene gun) with plasmid DNA or with plasmid DNA encoding ovalbumin. Three days later, regional lymph node cells were removed and their proliferative response to ovalbumin peptide was measured. Cytokine assays were also done (see example 7 and page 33, lines 10-16).

Thus, the priority of the present application is not validly claimed because it was not the first filing of the claimed subject-matter.

## **Section III**

1. Claims 1-12 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

## **Section V**

1. Reference is made to the following document :  
  
D2: IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 ( Joint Congress of the British Society for Immunology and the British Society for Allergy & Clinical Immunology.;Harrogate, England, UK; November 30-December 03).
2. The document D2 is the scientific counterpart of the present PCT application. D2 was published before the filing date of 29.09.2000 and because the priority of the



present application is not valid (see section III above) its contents are prior art for the subject-matter claimed in the present application. D2 describes the CD4 T-cell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells (see abstract). Thus, the subject-matter of present claims 1-12 is not novel (Article 33 (2) PCT).

3. For the assessment of the present claims 1-12 on the question whether they are industrially applicable, no unified criteria exist in the PCT. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognise as industrially applicable the subject-matter of claims to the methods of medical treatment practised on the human or animal body.

#### **Section VIII**

1. The attention of the applicant is called to the fact that most, if not all, national or regional jurisdictions would not accept a claim to a method of diagnosis performed on the human body.



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PG3798</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 03730</b>	International filing date (day/month/year) <b>29/09/2000</b>	(Earliest) Priority Date (day/month/year) <b>01/10/1999</b>
Applicant  <b>GLAXO GROUP LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**ASSAYING IN VIVO T-CELL RESPONSE UPON DNA VACCINATION**

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1



None of the figures.



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03730

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, PAJ, WPI Data, EMBASE, MEDLINE, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MANICKAN ELANCHEZHIAN ET AL: "Induction of protective immunity against herpes simplex virus with DNA encoding the immediate early protein ICP 27." VIRAL IMMUNOLOGY, vol. 8, no. 2, 1995, pages 53-61, XP000981753 ISSN: 0882-8245 abstract	1,2,4,8,9
X	WO 99 19478 A (BARZAGA ELENE ;US HEALTH (US); ZAREMBA SAM (US); SCHLOM JEFFREY (U) 22 April 1999 (1999-04-22) abstract page 18, line 14 - line 17 page 56 -page 57; claims 38,39 page 5, line 10 - line 15 --- -/--	1,3

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

7 February 2001

Date of mailing of the international search report

26/02/2001

Name and mailing address of the ISA

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Authorized officer

Tuynman, A



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03730

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SEARLE PETER F ET AL: "Immunotherapy II: Antigen, receptors and costimulation." CANCER AND METASTASIS REVIEWS, vol. 15, no. 3, 1996, pages 329-349, XP000981545 ISSN: 0167-7659	1,2
A	abstract	11
A	PAPE KATHRYN A ET AL: "Use of adoptive transfer of T-cell-antigen-receptor-transgenic T cells for the study of T-cell activation in vivo." IMMUNOLOGICAL REVIEWS, vol. 156, 1997, pages 67-78, XP000981639 ISSN: 0105-2896 cited in the application the whole document	1-8,10,11
A	BRINKMANN VOLKER ET AL: "TCR-stimulated naive human CD4+ 45RO- T cells develop into effector cells that secrete IL-13, IL-5, and IFN-gamma, but no IL-4, and help efficient IgE production by B cells." JOURNAL OF IMMUNOLOGY, vol. 154, no. 7, 1995, pages 3078-3087, XP002159305 ISSN: 0022-1767 abstract page 3078, left-hand column, line 1 -right-hand column, line 1	1,4-8,10,11
A	✓WO 98 08947 A (US HEALTH) 5 March 1998 (1998-03-05) abstract	1,12
P,X	✓WO 00 12121 A (GLAXO GROUP LTD ;CHARO JEHAD (SE); KIESSLING ROLF (SE)) 9 March 2000 (2000-03-09) abstract page 21 -page 22; example 1 page 26 -page 27; example 7 page 33, line 10 -page 34, line 3	1-5,7,8
P,X	✓WO 99 65522 A (SIDNEY JOHN ;EPIMMUNE INC (US); SOUTHWOOD SCOTT (US); SETTE ALESSA) 23 December 1999 (1999-12-23) abstract page 20, line 8 - line 23 page 20, line 28 -page 21, line 6 page 30, line 31 - line 32	1,2,9

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03730

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>CREUSOT REMI ET AL: "CD4 T-cell responses after DNA vaccination by gene gun into mice following adoptive transfer of TCR-transgenic T cells." IMMUNOLOGY., vol. 98, no. suppl. 1, December 1999 (1999-12), page 129 XP002159306 Joint Congress of the British Society for Immunology and the British Society for Allergy &amp; Clinical Immunology.; Harrogate, England, UK; November 30-December 03, 1999 ISSN: 0019-2805 the whole document -----</p>	1-8,11



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03730

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9919478	A	22-04-1999	AU	9500498 A	03-05-1999
			EP	1017810 A	12-07-2000
WO 9808947	A	05-03-1998	AU	5507098 A	19-03-1998
WO 0012121	A	09-03-2000	AU	5740299 A	21-03-2000
WO 9965522	A	23-12-1999	AU	4577899 A	05-01-2000